



# FACTS

about  
Connecticut  
Women

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## School Nutrition: Preventive Health Care for Women and Girls

### Background to School Nutrition Bill

Nutrition has been linked conclusively to health and wellness. For example, soda consumption has been linked to obesity.<sup>1</sup> Therefore, nutrient rich and palatable foods that are low in excess energy from added sugars and fat should form the base of school lunch programs.<sup>2</sup> An increase in funding for healthy foods may mitigate the costs to society for malnutrition related illnesses.

An act concerning school nutrition was initially proposed in 2005. This act sought to provide regulation of soft drinks and prepackaged foods sold in school stores, vending machines, school cafeterias, and both school sponsored and non-school sponsored fundraising activities. The bill had broad support in both the House and Senate. Although the bill was vetoed in 2005, Governor Rell has indicated that she will support an amended nutrition bill in 2006.

### The Significance of Nutrition for Women and Girls

- Obesity is associated with significant health problems and is an early risk factor for disease and, ultimately, death.<sup>3</sup> Nationally, 15% of girls between 6-19 are considered overweight.<sup>4</sup> In Connecticut, 25% of children between the ages of 6-17 are considered overweight.<sup>5</sup> In the US, 30% of the adult population is obese.<sup>6</sup> Women are disproportionately obese: 33% of adult women are obese compared to 28% of adult men. Within Connecticut, 19% of the adult population is obese.<sup>7</sup>
- Osteoporosis affects 44 million people in the US, 68% of whom are women.<sup>8</sup> Two significant causes of osteoporosis are poor nutrition and lack of physical activity in childhood and adolescence.<sup>9</sup> By age 20, women have acquired 98% of their skeletal mass. Osteoporosis is a "pediatric epidemic with a geriatric outcome."<sup>10</sup>
- Nutrition plays a critical role in the maintenance of immune system health; poor nutrition suppresses immune system functioning. Studies have shown that the consumption of protein, fat, and sugars affect the production of insulin, antibodies, cell development, and other crucial components of the immune system.<sup>11</sup>
- Healthy diets significantly lower the risk of diabetes and heart disease.<sup>12</sup> Approximately 1 of every 400 to 600 children have type 1 diabetes.<sup>13</sup> Among adult women, 8.8% suffer from diabetes.<sup>14</sup> In 1997, approximately 7% of Connecticut

residents were estimated to suffer from diabetes and it was the 7th leading cause of death in Connecticut.<sup>15</sup>

## Good Nutrition Saves Health Care Dollars

- In 2003, direct health costs associated with the treatment of obesity-related diseases amounted to \$75 billion, which rose from \$52 billion in annual spending in 1995.<sup>16</sup> In 2003, health costs associated with obesity-related illnesses amounted to \$856 million in Connecticut.<sup>17</sup>
- Future annual expenditures for osteoporotic fractures were estimated to range between \$12.2 and \$17.9 billion.<sup>18</sup> Between 1993 and 1997, all osteoporosis-related discharge costs in Connecticut averaged to \$46.8 million a year.<sup>19</sup>
- In 2002, the direct medical costs and costs from disability, work loss, and premature mortality associated with diabetes amounted to \$132 billion.<sup>20</sup> In 1997, the costs associated with diabetes amounted to \$1.2 billion in Connecticut.<sup>21</sup>

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<sup>1</sup> Ludwig DS, Peterson KE, & Gortmaker SL. (2001). Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis. *Lancet*. 357:505–508.

<sup>2</sup> Committee on Nutrition, American Academy of Pediatrics. (2003). Policy Statement: Prevention of Pediatric Overweight and Obesity, Committee on Nutrition. *Pediatrics*, 112 (2):424-430.

<sup>3</sup> Committee on Nutrition, American Academy of Pediatrics. (2003). Policy Statement: Prevention of Pediatric Overweight and Obesity, Committee on Nutrition. *Pediatrics*, 112 (2):424-430.

<sup>4</sup> Hedley, A., Ogden, C., Johnson, C., Carroll, M., Curtin, L., & Flegal, K. (2004). Overweight and obesity among US children, adolescents, and adults, 1999-2002. *JAMA*, 291:2847-50.

<sup>5</sup> Buhl, L., Meliso, P., Roman, S., Zito, K., & DeChello, L. on behalf of the University of Connecticut Graduate Program in Public Health. (2005). Halting Childhood Obesity in Connecticut. Farmington, CT.

<sup>6</sup> Flegal K, Carroll M, Ogden C, & Johnson C. (2002). Prevalence and trends in obesity among US adults, 1999-2000. *JAMA*, 288:1723-7.

<sup>7</sup> Adult Obesity, Diabetes & Hypertension Rates: CDC's Behavioral Risk Factor Surveillance Survey, 2003.

<sup>8</sup> Looker, A., et al. (1997). Prevalence of low femoral bone density in older U.S. adults from NHANES III. *J Bone Miner Res.*, 12 (11) :1769-71.

<sup>9</sup> e.g., Etherington, J, et al. (1996). The Effect of Weight-Bearing Exercise on Bone Mineral Density: A Study of Female Ex-Elite Athletes and the General Population. *J Bone Miner Res.*, 11 (9): 1333-8; Recker, R. (1993). Prevention of Osteoporosis: Calcium Nutrition. *Osteoporosis Int.*, 3 (Suppl 1): 163-5.

<sup>10</sup> Sue Addiss, former CT Commissioner of Public Health.

<sup>11</sup> e.g., Chandra, R. (1986). Nutrition and immunity - Basic considerations. Part I. *Contemp Nutr*, 11(11); Barone, J et al. (1989). Dietary fat and natural-killer-cell activity. *Am J Clin Nutr*, 50:861-7; Levy JA (1982). Nutrition and the immune system, in D. Stites et al, Eds. *Basic and Clinical Immunology*. 4th Edition. Los Altos, CA. Lange Medical Publications, pp. 297-305.

<sup>12</sup> *American Journal of Clinical Nutrition* (2006).

<sup>13</sup> National Diabetes Statistics Fact sheet: General information and national estimates on diabetes in the U.S., 2005. Bethesda, MD: U.S. Dept of Health and Human Services, NIH, 2005.

<sup>14</sup> National Diabetes Statistics Fact sheet: General information and national estimates on diabetes in the U.S., 2005. Bethesda, MD: U.S. Dept of Health and Human Services, NIH, 2005.

<sup>15</sup> Connecticut Department of Public Health, Diabetes Fact Sheet as seen 2/8/06 at <http://www.dph.state.ct.us/BCH/HEI/diabetes.htm>.

<sup>16</sup> U.S. Department of Health and Human Services, Centers for Disease and Control Prevention, 2004.

<sup>17</sup> Finkelstein, E., Fiebelkorn, I., & Wang, G. (2004). State-level estimates of annual medical expenditures attributable to obesity. *Obesity Research*, 12: 18-24.

<sup>18</sup> Tosteson, A. & Hammond, C. (2002). Quality-of-Life Assessment in Osteoporosis: Health-Status and Preference-Based Measures. *Pharmacoeconomics*, 20 (5): 289-303.

<sup>19</sup> Connecticut Department of Public Health, Division of Policy, Planning, and Analysis. (2001).

<sup>20</sup> Hogan P, Dall T, Nikolov P; American Diabetes Association. (2003). Economic costs of diabetes mellitus in the US in 2002. *Diabetes Care*. 26:917–932.

<sup>21</sup> Connecticut Department of Public Health, Diabetes Fact Sheet as seen 2/8/06 at <http://www.dph.state.ct.us/BCH/HEI/diabetes.htm>.